UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Rangeland

Site ID: R036XB010NM

Site Name: Salty Bottomland (WP-1&2, HIV, ND)

Precipitation or Climate Zone: 9 to 14 inches

Phase:

PHYSIOGRAPHIC FEATURES

Narrative:

This alluvial floodplain site receives additional moisture from adjacent uplands. It is dissected by shallow rivulets, which will develop into deep, vertical-walled gullies when the vegetation has deteriorated. Slopes range from 1 to 8 percent. Elevation ranges from 6,400 to 7,200 feet above sea level.

Land Form:

1. Flood plain
2.
3.

Aspect:

1. N/A
2.
3.

	Minimum	Maximum
Elevation (feet)	6,400	7,200
Slope (percent)	1	8
Water Table Depth (inches)	42	>72

Flooding:	**Minimum**	**Maximum**
Frequency	Rare	Occasional
Duration	Extremely brief	Brief

Ponding:	**Minimum**	**Maximum**
Depth (inches)	?	?
Frequency	Rare	Occasional
Duration	Very brief	Brief

Runoff Class:

Negligible to high.

CLIMATIC FEATURES

Narrative:

This site has an arid, mild, dry climate with distinct temperature variations and large annual and diurnal temperature changes.

Mean annual precipitation varies from 10 to 13 inches. Departures from the annual average of 3 inches or more are common. Approximately 60 percent of this moisture occurs during the vegetative growth period, April through September. June is the driest month. Four to five inches of precipitation are received during July, August and September, which influences the presence and production of plants, which grow during the warm-season. Winter and early spring moisture is conducive to the production of cool-season herbaceous plants. Maximum shrub growth also occurs at this time. Summer precipitation is characterized by brief, localized thunderstorms. Winter moisture occurs as light rain or snow. Snow sometimes remains on the ground for extended periods.

Temperature varies form a mean annual of 69 degrees F in July to 26 degrees F in January. The maximum is near 100 degrees F and the minimum is near 40 degrees F below zero. The average last killing frost in the spring is near the first of June, and the first killing frost in the fall is the latter part of September. Temperatures are usually warm enough for herbaceous plant growth from April through September.

Wind velocities are relatively light most of the year, and occasionally winds will exceed 25 miles per hour. These stronger winds, which usually occur in the spring and early summer, increase transpiration rates of plants and rapidly dry the surface soil.

Climate data was obtained from the WCCR web site. Using 50% probabilities for freeze-free and frost-free seasons at 28.5 degrees F and 32.5 degrees F respectively.

	Minimum	**Maximum**
Frost-free period (days):	104	119
Freeze-free period (days):	134	145
Mean annual precipitation (inches):	9	14

Monthly moisture (inches) and temperature (^{0}F) distribution:

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	.52	1.79	7.6	45.6
February	.43	1.56	10.7	50.4
March	.67	1.92	16.8	56.8
April	.52	1.26	22.7	66.0
May	.62	1.26	28.8	75.5
June	.49	1.21	35.1	85.8
July	1.54	3.41	42.1	88.9
August	1.86	3.72	41.8	85.8
September	1.08	1.86	34,6	78.8
October	1.01	1.86	25.3	68.8
November	.71	1.60	16.2	56.0
December	.56	1.49	9.3	47.0

Climate Stations:

				Period		
Station ID	292241	Location	Cuba, NM	From: 01/01/14	To:	12/31/01
Station ID	293422	Location	Gallup FAA AP, NM	From: 01/01/21	To:	12/31/01

INFLUENCING WATER FEATURES

Narrative:

This site may be influenced by water from a wetland or stream.

Wetland description:

System	Subsystem	Class
N/A		

If Riverine Wetland System enter Rosgen Stream Type:

N/A

REPRESENTATIVE SOIL FEATURES

Narrative:

The soils in this site are generally deep and well drained. They are affected by sodium. The pH is about 8.0. Surface textures may be loam, fine sandy loam, clay loam and silty clay loam. The subsoil is usually a clay or clay loam. Water intake rate is slow to very slow. Permeability is moderately slow to very slow. Plant roots may be restricted by the sodium content of the soil. Available water-holding capacity is approximately 7 inches in a five-foot profile.

Parent Material Kind: Marine deposits
Parent Material Origin: Gypsum

Surface Texture:

1. Loam
2. Fine sandy loam
3. Clay loam
4. Silty clay loam

Surface Texture Modifier:

1. N/A
2.
3.

Subsurface Texture Group: Clayey
Surface Fragments <=3" (% Cover): N/A
Surface Fragments >3" (% Cover): N/A

Subsurface Fragments <=3" (%Volume): 15 to 35
Subsurface Fragments >=3" (%Volume): 15 to 35

	Minimum	**Maximum**
Drainage Class:	Somewhat poorly	Well
Permeability Class:	Impermeable	Moderately slow
Depth (inches):	60	>72
Electrical Conductivity (mmhos/cm):	0.00	16.00
Sodium Absorption Ratio:	0.00	45.00
Soil Reaction (1:1 Water):	7.3	9.6
Soil Reaction (0.1M CaCl2):	N/A	N/A
Available Water Capacity (inches):	6	9
Calcium Carbonate Equivalent (percent):	N/A	N/A

PLANT COMMUNITIES

Ecological Dynamics of the Site:

Plant Communities and Transitional Pathways (diagram)

Plant Community Name: Historic Climax Plant Community

Plant Community Sequence Number: 1 **Narrative Label**: HCPC

Plant Community Narrative: Historic Climax Plant Community
The aspect of vegetation on this site is a shrub-grass mixture characterized by mid-grasses, alkali sacaton and western wheatgrass. The characteristic shrubs are black greasewood and fourwing saltbush. Perennial forbs are a minor component of the plant community. Annual forbs and grasses occur in relative abundance during the spring in years, which have above average growing conditions. When the potential plant community deteriorates, there is a marked increase in relative abundance of shrubs, cacti, perennial and annual forbs. In severe vegetative deterioration, the site will consist dominantly of shrubs, but can also be dominated by greasewood, sagebrush, annual forbs and annual grasses, with lesser amount of perennial grasses and large areas of unprotected soils.

Canopy Cover:	
Trees, shrubs and half-shrubs	15 %
Ground Cover (Aveage Percent of Surface Area).	
Grasses & Forbs	25
Bare ground	35
Surface gravel	0
Surface cobble and stone	0
Litter (percent)	25
Litter (average depth in cm.)	3

Plant Community Annual Production (by plant type):

Annual Production (lbs/ac)

Plant Type	Low	RV	High
Grass/Grasslike	390	714	975
Forb	60	105	158
Tree/Shrub/Vine	150	263	375
Lichen			
Moss			
Microbiotic Crusts			
Total	600	1,050	1,500

Plant Community Composition and Group Annual Production: Plant species are grouped by annual production **not** by functional groups.

Plant Type - Grass/Grasslike

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
1	SPAI	Alkali Sacaton	315 – 368	315 – 368
2	ACHY	Indian Ricegrass	53 – 105	53 – 105
3	PASM	Western Wheatgrass	210 – 263	210 – 263
4	ELEL5	Bottlebrush Squirreltail	105 – 158	105 – 158
5	PLJA	Galleta	105 – 158	105 – 158
6	BOGR2	Blue Grama	53 – 105	53 – 105
7	DISP MURI 2GRAM	Inland Saltgrass (desert) Mat Muhly Other Grasses	53 – 105	53 – 105

Plant Type - Forb

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
8	ALCO2 PYRRO	Iodinebush Goldenweed spp.	32 – 53	32 – 53
9	AMPS SENEC 2FORB	Western Ragweed Groundsel spp. Other Forb	32 – 53	32 - 53

Plant Type – Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
10	SAVE4	Black Greasewood	32 – 53	32 – 53
11	ATCO	Shadscale	32 – 53	32 – 53
12	ARTR2	Big Sagebrush	32 – 53	32 – 53
13	ATCA2	Fourwing Saltbush	53 – 105	53 – 105
14	KRLA2	Winterfat	32 – 53	32 – 53
15	PIDE 2SD	Bud Sagebrush Other Shrubs	11 – 32	11 – 31

Plant Type - Lichen

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Moss

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Microbiotic Crusts

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Other species that could appear on this site include: broom snakeweed, annual bromes, foxtail barley, threeawn spp., Russian thistle, Rocky Mountain beeplant, threadleaf groundsel, cheatgrass and sand dropseed.

Plant Growth Curves

Growth Curve ID **0010NM**

Growth Curve Name: **HCPC**

Growth Curve Description: **A mid-grassland shrub mixture with a minor forb component.**

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	0	3	5	10	10	25	30	12	5	0	0

ECOLOGICAL SITE INTERPRETATIONS

Animal Community:

Habitat for Wildlife:

This site provides habitats which support a resident animal community that is characterized by mule deer, coyote, desert cottontail, plains pocket mouse, deer mouse, Botta's pocket gopher, scaled quail, house finch, short-horned lizard, striped whiptail, and Western spadefoot toad.

Hydrology Functions:

The runoff curve numbers are determined by field investigations using hydrologic cover conditions and hydrologic soil groups.

Hydrologic Interpretations	
Soil Series	Hydrologic Group
Billings	B
Breadsprings	C
Cementlake	D
Christianburg	D
Conchovar	C
Gobernador	D
Heshotauthla	D
Nahodish	D
Navajo	D
Ravola	D
Rehobeth	D
San Mateo	B
Sparank	D
Sparham	D
Venadito	D
Werlog	C

Recreational Uses:

These sites have very low potential for outdoor recreation.

Wood Products:

This site has no significant potential for wood production.

Other Products:

Grazing:

This site is well suited for grazing use during all seasons of the year by both small and large animals. Periodic rest from grazing use by domestic livestock during the growing season is necessary to maintain a balanced, healthy plant community.

Other Information:

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month

Similarity Index	Ac/AUM
100 - 76	2.0 – 3.0
75 – 51	2.9 – 5.9
50 – 26	5.8 – 11.0
25 – 0	11.0+

Plant Part	Code	Species Preference	Code
Stems	**S**	**None Selected**	**NS**
Leaves	**L**	**Preferred**	**P**
Flowers	**F**	**Desirable**	**D**
Fruits/Seeds	**F/S**	**Undesirable**	**U**
Entire Plant	**EP**	**Not Consumed**	**NC**
Underground Parts	**UP**	**Emergency**	**E**
		Toxic	**T**

Plant Preference by Animal Kind:

Animal Kind: Livestock
Animal Type: Cattle

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Indian Ricegrass	Achnatherum hymenoides	EP	P	P	P	P	P	P	P	P	P	P	P	P
Western Wheatgrass	Pascopyrum smithii	EP	D	D	P	P	P	D	D	D	D	D	D	D
Blue Grama	Bouteloua gracilis	EP	D	D	D	D	P	P	P	P	P	D	D	D
Galleta	Pleuraphis jamesii	EP	U	U	U	U	U	D	D	D	D	D	U	U
Alkali Sacaton	Sporobolus airoides	EP	D	D	D	D	D	P	P	P	U	U	U	D

Animal Kind: Livestock
Animal Type: Sheep

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Fourwing Saltbush	Atriplex canescens	L/S	P	P	P	P	P	D	D	D	D	D	D	P
Winterfat	Krascheninnikovia lanata	L/S	P	P	P	P	P	P	P	P	P	P	P	P
Blue Grama	Bouteloua gracilis	EP	D	D	D	D	P	P	P	P	P	D	D	D
Bud Sagebrush	Picrothamuus desertorum	L/S	D	D	P	P	P	D	D	D	U	U	U	D
Indian Ricegrass	Achnatherum hymenoides	EP	P	P	P	P	P	D	D	D	D	D	D	P

SUPPORTING INFORMATION

Associated sites:

Site Name	Site ID	Site Narrative

Similar sites:

Site Name	Site ID	Site Narrative

State Correlation:

This site has been correlated with the following sites: _____

Inventory Data References:

Data Source	# of Records	Sample Period	State	County

Type Locality:

State: **New Mexico**

County: **Rio Arriba, Sandoval, San Juan**

Latitude: _____

Longitude: _____

Township: _____

Range: _____

Section: _____

Is the type locality sensitive? **Yes** ☐ **No** ☐

General Legal Description: _____

Relationship to Other Established Classifications:

Other References:

Data collection for this site was done in conjunction with the progressive soil surveys within the New Mexico and Arizona Plateaus and Mesas 36 Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys

Characteristic Soils Are:	
Billings, Breadsprings, Cementlake,	Christianburg, Conchovar, Gobernador
Heshotauthla, Nahodish, Navajo, Ravola	Rehobeth, San Mateo, Sparank, Sparham
Venadito, Werlog	
Other Soils included are:	

Site Description Approval:

Author	Date	Approval	Date
Don Sylvester		Don Sylvester	

Site Description Revision:

Author	Date	Approval	Date
Elizabeth Wright	08/14/02	George Chavez	0/11/02